
Book Review

Educating Physicians: A Call for Reform of Medical School and Residency

Molly Cooke, David M. Irby, and Bridget C. O'Brien, with a foreword by Lee S. Shulman. San Francisco: Jossey-Bass, 2010. ISBN-13: 978-0470457979. 320 pages, \$40.00 US.

Educating Physicians: A Call for Reform of Medical School and Residency by Molly Cooke, David M. Irby, and Bridget C. O'Brien summarizes the Carnegie Foundation study of medical education 100 years after the prior Carnegie study, often called the Flexner Report. The book is the culmination of a study of the medical education literature and a series of site visits to 11 of the 130 accredited allopathic medical schools in the United States and to three teaching hospitals. The authors did not visit osteopathic or chiropractic schools. Thus, the focus was strictly on allopathic medical education through the continuum of undergraduate medical education through residency training and beyond. The primary purpose of the book was to "stimulate discussion about the current status and future direction of medical education and advance health globally" (p. 8). I believe that educators within chiropractic education will find much of the discussion very relevant and thus can make use of the book to stimulate their own discussion.

The authors focused on areas that could be improved and provided a succinct statement of what is lacking in medical education on page 3 of the introduction, greatly expanded in chapter 1 (*Educating Physicians: Contexts and Challenges*). In part they stated that "medical training is inflexible, excessively long, and not learner centered." They noted that allopathic education is overly focused on inpatient clinical experience, that formal knowledge is poorly linked to clinical experience, and that not enough attention is paid to issues of population health and health care delivery. They observed that students often lack understanding of the nonclinical roles of the physician (teaching, inquiry, and advocacy) and that the "pace and commercial nature of health care" is impeding development of appropriate professional values.

Based on their examination of medical education today, the authors provided four recommendations discussed in the introduction and in chapters 1 and 7. Medical education should strive for: 1) standardization of learning outcomes and individualization of the learning process; 2) integration of formal knowledge and clinical experience; 3) development of habits of inquiry and innovation, and 4) an appropriate focus on professional formation at all levels of training. The discussion surrounding these recommendations, and the specific challenges related to each, is well worth reading and reviewing as a means to gain insight into chiropractic educational programs.

In chapter 2 (*Being a Doctor: Foundations of Professional Education*), the authors tackled the three domains of a physician's work: caring for patients, engaging in inquiry

and innovation, and participating in professional communities. They did this through a very helpful discussion of two exemplars: Dr. Caldwell, a trauma surgeon, and Dr. Alvarado, a family physician. To shed light on learning in each domain, the authors integrated many perspectives from the science of learning into each discussion, building on three assumptions about learning: it is progressive and developmental, participatory, and situated and distributed. As they wove learning theory together with the stories of the two exemplars, I found many points of connection with my own experiences as a teacher. I also found myself setting the book down frequently, as each section stimulated a new idea about how I might help enhance education for both novice and more advanced learners. My only caution with this chapter is that it brings to the discussion a wide array of concepts on the science of learning; thus prior knowledge in this arena is very helpful. Educational leaders in chiropractic education with that background should find the discussion very stimulating.

In chapter 3 (The Student's Experience: Undergraduate Medical Education) the discussion focused on the models of education used in preclinical and clinical training, comparing each to their criteria that medical education provide opportunities for learning to be progressive and developmental moving from the simple to the complex; participatory with active learning strategies; and situated in clinical settings with opportunities to appreciate that the knowledge needed to provide excellent care is distributed among all members of the setting. Chiropractic educators should find the discussion of the models of preclinical education most enlightening and might want to examine the arguments made for early clinical exposure.

Chapter 4 (The Resident's Experience: Graduate Medical Education) explored the challenges of training in an environment of increasing information load, decreasing resident work hours, and increasing demands on faculty to generate clinical income. Although the discussion is thought provoking and provides insight to this level of training in today's health systems, readers may find the content less relevant to chiropractic education. Chapter 5 (Regulating and Financing Medical Education) provided a useful summary of the current and historic trends in financing medical education as well as the current challenges. There was also a discussion of the regulatory environment. The chapter closed with a statement that may resonate with those in chiropractic education: "The regulatory burden on schools and residency programs is great, and the standards of one agency are not always consistent with those of others." The authors noted a need for change and provided their ideas later in the book.

Chapter 6 (Leadership for Organizational Change) addressed the characteristics that the team uncovered in their study as being necessary for transforming education. These elements include: 1) effective leaders and productive teams; 2) an institutional culture of creativity, inquiry, and continuous improvement; 3) organizational structures that promote action, discipline, and innovation; 4) educational resources and supportive services to fuel innovation and excellence; and 5) academic communities that advance the scholarship of teaching and learning. Again, as in chapter 2, the use of exemplar stories enhanced the discussion and provided a means to gauge our own organizations for readiness to change.

Chapter 7 (Realizing the Vision: Transforming Medical Education) and chapter 8 (Supporting Excellence Through Effective Policy) provided the report's call to action, with chapter 7 focusing on local programs and institutions, while chapter 8 focused on policy and regulatory changes that would help promote the changes felt necessary by the authors. It is in this section where the authors' creativity is demonstrated as they go beyond their observations and synthesis of relevant learning sciences, to posit a set of principles related to curriculum, pedagogy, and assessment.

1. Educators must distinguish more clearly between core curricular content and everything else.
2. Learners at all levels should not be obliged to spend time unproductively repeating clinical activities once they have mastered the competencies appropriate to their level.
3. At every level it should be emphasized that competence means minimal standard.
4. It is the aim to have learners develop the motivation and skill to teach themselves.
5. Medical education must ensure through assessment that learners achieve predetermined standards of competence with respect to knowledge and performance in core domains.
6. Assessment must go beyond what learners know and can do to address learner ability to identify gaps and next steps for learning.
7. Commitment to excellence is a hallmark of professionalism in medicine, and expertise is likewise a continuing commitment, not an attribute.

They argue that these seven principles are “broadly applicable” and should be “widely employed” (p. 214). However, it will be up to those in each educational institution to examine the relevance to their setting and to determine what advances are possible within their means. This is even more true for the 11 programmatic approaches that they offered, “to stimulate creative thinking” for educational leaders (p. 217). As the discussion in chapter 8 made clear, any transformational change in professions’ education must be accompanied by changes in the regulations governing that profession, allowing for flexibility and innovation.

It is yet to be seen whether this report will have the same ultimate impact as the Flexner Report of 1910; however, I believe that it behooves all of us who are leaders in health professions education to be familiar with the report’s contents and to be open to the continuous improvement of the training that we provide in each institution and health profession.

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